



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/550,246

09/23/2005

Donald W. Hayward

1-36905

1647

43935

7590

05/14/2007

FRASER CLEMENS MARTIN & MILLER LLC  
28366 KENSINGTON LANE  
PERRYSBURG, OH 43551

EXAMINER

BOYKIN, TERRESSA M

ART UNIT

PAPER NUMBER

1711

MAIL DATE

DELIVERY MODE

05/14/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/550,246

Applicant(s)

HAYWARD ET AL.

Examiner

Terressa M. Boykin

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 12/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

Art Unit: 1711

**Priority**

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

**Abstract**

Applicant is reminded of the proper language and format of an Abstract of the Disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 250 words. The printer will no longer accept Abstracts that are more than 25 lines, regardless of the number of words. The form and legal phraseology often used in patent claims, such as "means" and "said", should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details. The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

**Claim Rejections - 35 USC § 112**

**Claims 1- 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

The recited "comminuting" is functional language and it is not supported by further recitations in the claim(s) of sufficient structure to accomplish the function. The claim merely reads on cutting or pulverizing, or any process which divides a moiety into small parts etc. Note further that a process should at least recite *all positive, active step and all process parameters necessitated by the specification so that the claim will "clearly set out and circumscribe a particular area with a reasonable degree of precision and particularity*, In re Moore, 169 USPQ 236, and make it clear what subject matter the claim encompasses, as well as make clear the subject matter from others would be precluded. In re Hammack 166 USPQ 204.

**Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1- 8 are rejected under 35 U.S.C. 102(b) as being anticipated by USP 3728309 see abstract, cols. 2-5 claims 1-10.**

USP 3728309 discloses a high reaction temperatures may be employed in the solid state polycondensation of crystalline linear polyester prepolymers or resins (e.g., polyethylene terephthalate) having a reduced specific viscosity of 0.2 or more by maintaining the polycondensation temperature initially (e.g., at 200--230' C.) between the sticking temperature of the resin in the amorphous state and in the initial crystalline state until the resin sticking temperature has substantially further increased as the reaction progresses, and thereafter elevating the polycondensation temperature either stepwise or gradually to a level (e.g., 240' C. or more) substantially above the initial crystalline sticking temperature in producing resins of higher molecular weight without significant agglomeration; the reaction rates are generally faster and higher molecular weights are obtainable than heretofore.

Suitable time temperature relationships are readily determined by observing the change in appearance of the particular resin or prepolymer selected from translucent to opaque as an indication of substantial crystal formation in the resin. Although it is contemplated that a resin in the form of thin films, filaments or ribbons may be polycondensed in the treatment of the reference, it is usually preferred to subdivide

Art Unit: 1711

the material as by flaking or chopping a film or sheet into thin pieces or by chopping or cutting filaments, ribbons or rods. In addition, the chopped material may be ground or pulverized in a mill to provide a 15 fine powder suitable for further polymerization in a fluidized operation. In general, the resin may be subdivided either before or after it is crystallized, and it is often chopped or cut in the amorphous state, but pulverizing operations are usually facilitated by feeding a resin that 20 has been hardened by crystallization. Note claims 9 and 10 wherein the thermoplastic, crystalline resin is in the form of a member selected from the group consisting of films, filaments, rods, bars, ribbons, powder, pellets, chips and flakes.

In EXAMPLE 3 of the reference, the polyethylene terephthalate resin is produced by the reaction of dimethyl terephthalate and ethylene glycol in the presence of 0.06% antimony trioxide and 0.68% manganous acetate tetrahydrate as ester interchange catalysts as well as 0.15% titanium dioxide (all of these percentages being based on the dimethyl terephthalate) as a delusterant followed by melt-polymerization. The resulting polymer is cast from the melt at 270° C. onto a cold, rotating, stainless steel cylinder (i.e. applicants claim 4) in the form of a 32 inch continuous sheet of 12-inch width.

In EXAMPLE 4 another batch of the crystallized polyethylene terephthalate chips of Example 3 are ground to a particle size 20 smaller than 40- mesh in a mill. A quantity of the resulting particles are placed in a glass test tube which is evacuated to an absolute pressure of 0.01 mm. mercury. This tube is then placed in a stirred and preheated oil bath which is maintained at a temperature of 200° C. After 15 minutes 25 in the bath, the bath temperature is gradually increased to 246° over a period of 25 minutes and held at that level for 55 minutes before it is raised to a final temperature of 265 C. over a 20-minute interval. After 2.8 hours at the latter temperature, the reaction tube is removed and 30 cooled while still maintaining the vacuum therein.

In EXAMPLE 5 of the reference discloses a low molecular weight polyethylene terephthalate with an RSV of 0.44 and a content of 0.025% antimony trioxide (based on the terephthalic acid charged) is prepared by esterification and melt polymerization at 284° C. until the carboxyl content is 22 equivalents per million grams. This material is extruded as a monofilament of 3/16 inch diameter, quenched and cut into pellets of 1/8 inch length.

The reference discloses a process which treats polyethylene terephthalate which may be in the form of flakes and may be prepared via the melting and mixing of the particles. *Since the disclosed particle size, i.e. less than about 300 microns, are expressed differently, they nevertheless appear to overlap those claimed and thus are not distinguishable over the prior art.* The term "about" permits some tolerance. See, e.g., In re Ayers, 69 USPQ 109 (CCAP 1946), where "at least about 10%" was held to be anticipated by a teaching of a content "not to exceed about 8%." Where close prior art exists the line of demarcation can become blurred, however, with Applicant bearing the burden of establishing that the term is sufficiently clear to avoid the prior art. See Amgen v. Chugai, 927 F.2d 1200 (Fed. Cir. 1991), where the court could not determine which value between the prior art's value of 128,620 and the recited value of "about" 160,000 constituted infringement. As noted at page 1218 of the decision, the holding was further supported by the fact that "nothing in the specification, prosecution history, or prior art provides any indication as to what range of specific activity is covered by the term."

In view of the above, there appears to be no significant difference between the reference and that which is claimed by applicant(s). Any differences not specifically mentioned appear to be conventional. Consequently, the claimed invention cannot be deemed as novel and accordingly is unpatentable.

### **Correspondence**

**Please note that the cited U.S. patents and patent application publications are available for download via the Office's PAIR. As an alternate source, all U.S. patents and patent application publications are available on the USPTO web site**

Art Unit: 1711

**([www.uspto.gov](http://www.uspto.gov)), from the Office of Public Records and from commercial sources. Applicants may be referred to the Electronic Business Center (EBC) at <http://www.uspto.gov/ebc/index.html> or 1-866-217-9197.**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Terressa Boykin whose telephone number is 571 272-1069. The examiner can normally be reached on Monday through Friday from 6:30am to 3:00pm.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. The general information number for listings of personnel is ( 571-272-1700).

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tmb

  
Examiner Terressa Boykin  
Primary Examiner  
Art Unit 1711